



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,017	09/30/2003	Myoung-Kee Baek	8734.240.00 US	2379
30827 7590 10/28/2008 MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006				
EXAMINER				
TALBOT, BRIAN K				
ART UNIT		PAPER NUMBER		
1792				
MAIL DATE		DELIVERY MODE		
10/28/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/674,017

Applicant(s)

BAEK ET AL.

Examiner

Brian K. Talbot

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. The amendment filed 7/21/08 has been considered and entered. Claims 1-13 remain in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. In light of the amendment filed 7/21/08, the 35 USC 132(a) New Matter rejection and the 35 USC 112 first paragraph rejection have been withdrawn.
4. In light of the amendment filed 7/21/08, 35 USC 103 rejection over Miyahara et al. (6,755,127) has been withdrawn. However, the following 35 USC 103 rejection has been necessitated by the amendment.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 103

6. Claims 1-4 and 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hattori et al. (5,403,616) in combination with JP 08-031,830.

Hattori et al. (5,403,616) teaches a method of forming patterned transparent conductive film. The patterning process comprises forming a masking pattern (2) on a substrate (10), applying the coating layer (3), heating the coating layer and the mask to set the coating layer and remove the mask to form the patterned layer (abstract, Figs. 1a-1e, 2a-2e and col. 2, line 60 – col. 3, line 65). Hattori et al. (5,403,616) teaches the process utilized for LCD devices (col. 1, lines 9-25). The glass substrate can have a coating of silica thereon prior to the application of the patterned coating layer (examples). The coating layer can be applied by spin coating, dip coating or roll coating (col. 4, lines 41-64). Hattori et al. (5,403,616) teaches physically removing the masking pattern by ultrasonic cleaning or gas jet of air (col. 4, lines 28-40).

Hattori et al. (5,403,616) fails to teach a master being separately formed and separable from the substrate. In addition, the use of a doctor blade to planarize the resist coating for claims 10-13.

JP 08-031,830 teaches a solder bump forming process whereby a mask is set with a distance above the substrate and solder is filled in the mask. The solder can be placed on the substrate by die punching (Figs. 1A-1D) or by being close enough to the substrate (Figs. 4A-4D).

Therefore, it would have been obvious for one skilled in the art at the time the invention was made to have modified Hattori et al. (5,403,616) process by substituting a “displaced mask”

as evidenced by JP 08-031,830 for the mask of Hattori et al. (5,403,616) with the expectation of achieving similar success.

Regarding claims 4,11 and 13, the claims recite the master being separated from the substrate by a few microns. It is the Examiner's position that this "distance of separation" is a "result effective variable" which can be optimized through routine experimentation as to the desired distance require to produce the desired result. If Applicant disagrees that the "distance is critical" and unexpected, the Examiner invites Applicant to supply a showing of unexpected results regarding this variable.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hattori et al. (5,403,616) in combination with JP 08-031,830 further in combination with Applicant's admitted state of the art (specification pg. 2-5 and Figs. 1-2).

Hattori et al. (5,403,616) in combination with JP 08-031,830 fails to teach and etching layer being metal.

Applicant's admitted state of the art (specification pg. 2-5 and Figs. 1-2) teaches that gate electrodes, drain electrodes and pixel electrodes are formed on a glass substrate for LCD manufacture.

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified over Hattori et al. (5,403,616) in combination with JP 08-031,830 process by including a metal electrode layer to be etched as evidenced by Applicant's admitted state of the art (specification pg. 2-5 and Figs. 1-2) with the expectation of achieving similar success, i.e. a patterned layer.

Response to Amendment

7. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argued that the prior art fails to teach a master separated from the substrate during the filling of the master.

JP 08-031,830 teaches this limitation as noted above. JP 08-031,830 teaches a mask being displaced above a substrate which maintains the separation during filling of the master and forming the pattern coating.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 8AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian K Talbot/
Primary Examiner, Art Unit 1792

BKT